

3. CHEMICAL AND PHYSICAL INFORMATION**3.1 CHEMICAL IDENTITY**

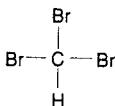
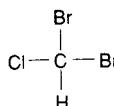
Table 3-1 lists common synonyms, trade names, and other pertinent identification information for bromoform and chlorodibromomethane.

2.2 PHYSICAL AND CHEMICAL PROPERTIES

Table 3-2 lists important physical and chemical properties of bromoform and chlorodibromomethane.

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TABLE 3-1. Chemical Identity of Bromoform and Chlorodibromomethane

	Value Bromoform	Value Chlorodibromomethane	Reference
Chemical name	Bromoform	Chlorodibromomethane	NLM 1988
Synonyms	Tribromomethane; methenyltribromide; methane, tribromo-	Dibromochloromethane; methane, dibromochloro-	NLM 1988
Trade name	No data	No data	
Chemical formula	CHBr ₃	CHBr ₂ Cl	NLM 1988
Chemical structure			
Identification numbers:			
CAS Registry	75-25-2	124-48-1	NLM 1988
NIOSH RTECS	PB5600000	PA6360000	HSDB 1988
EPA Hazardous Waste	U225	No data	NLM 1988
OHM/TADS	8100034	No data	HSDB 1988
DOT/UN/NA/IMCO Shipping	UN 2515 IMCO 6.1	No Data	NLM 1988 HSDB 1988
HSDB	2517	2763	NLM 1988
NCI	C55130	C55254	NLM 1988

CAS = Chemical Abstracts Service; NIOSH = National Institute for Occupational Safety and Health; RTECS = Registry of Toxic Effects of Chemical Substances; EPA = Environmental Protection Agency; OHM/TADS = Oil and Hazardous Materials/Technical Assistance Data System; DOT/UN/NA/IMCO = Department of Transportation/United Nations/North America/International Maritime Dangerous Goods Code; HSDB = Hazardous Substances Data Bank; NCI = National Cancer Institute.

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TABLE 3-2. Physical and Chemical Properties of Bromoform and Chlorodibromomethane

	Value Bromoform	Value Chlorodibromomethane	Reference
Molecular weight	252.75	208.29	Weast 1985
Color	Colorless	Colorless to pale yellow	Verschueren 1983
Physical state	Liquid	Liquid	Verschueren 1983
Melting point	8.3°C	<-20°C	Weast 1985 Verschueren 1983
Boiling point	149.5°C	119-120°C	Weast 1985
Density at 20°C	2.8899	2.451	Weast 1985
Odor	Sweet, similar to chloroform	No data	Verschueren 1983
Odor threshold:			
Water	0.51 mg/L	No data	Amoore and Hautala 1983
Air	13.45 mg/m ³	No data	Amoore and Hautala 1983
Solubility:			
Water at 20°C	3.01x10 ³ mg/L	4.00x10 ³ mg/L ^a	Mabey et al. 1982
Organic solvents	Soluble in alcohol, ether, benzene, chloroform, lignin	Soluble in alcohol, ether, benzene, chloroform	Weast 1985
Partition coefficients:			
Log octanol/water	2.38 ^a	2.24 ^a	Mabey et al. 1982
Log K _{oc}	2.06 ^a	1.92 ^a	Mabey et al. 1982
Vapor Pressure at 20°C	5 mmHg	76 mmHg	Mabey et al. 1982
Henry's law constant	5.6x10 ⁻⁴ atm·m ³ /mol	9.9x10 ⁻⁴ atm·m ³ /mol	Mabey et al. 1982
Autoignition temperature	No data	No data	
Flashpoint	No data	No data	
Flammability limits	Non-flammable	Non-flammable	Sax and Lewis 1987
Conversion factors	1 ppm = 10 mg/m ³ 1 mg/m ³ = 0.097 ppm	1 ppm = 8.5 mg/m ³ 1 mg/m ³ = 0.12 ppm	Verschueren 1983

^aCalculated value.

